



Athabasca Bioregional Society
Presentation to the Coal Policy Committee
Hinton, Alberta
August 17th, 2021



Athabasca Bioregional Society – Statement on Coal

Coal exploration or development should not be permitted on the Eastern Slopes of Alberta.

Having lived with and experienced the impacts of coal exploration and mining in west central Alberta that have happened over the last 50 years, the Athabasca Bioregional Society believes that the negative impacts of coal development on the environment, watershed integrity, climate justice, human health, biodiversity and a sustainable local economy outweigh any short term benefits from coal development along Alberta's East Slopes.



Key Points in this presentation

- Water quality
 - Selenium in the Coal Branch
 - Fish species at risk – Athabasca Rainbow Trout and Bull Trout
- Biodiversity
 - Mines sites as wildlife mortality ‘sinks’ – don’t be fooled by ‘reclamation’ promises
- Community economic sustainability - the need to turn a page on unsustainable coal development along the East Slopes
 - the plight of Grande Cache – boom and bust and community insecurity
 - Economic development for Hinton – a change is coming
- Introduction – Chief Jim Ocheise, Foothills Ojibway Anishinabe



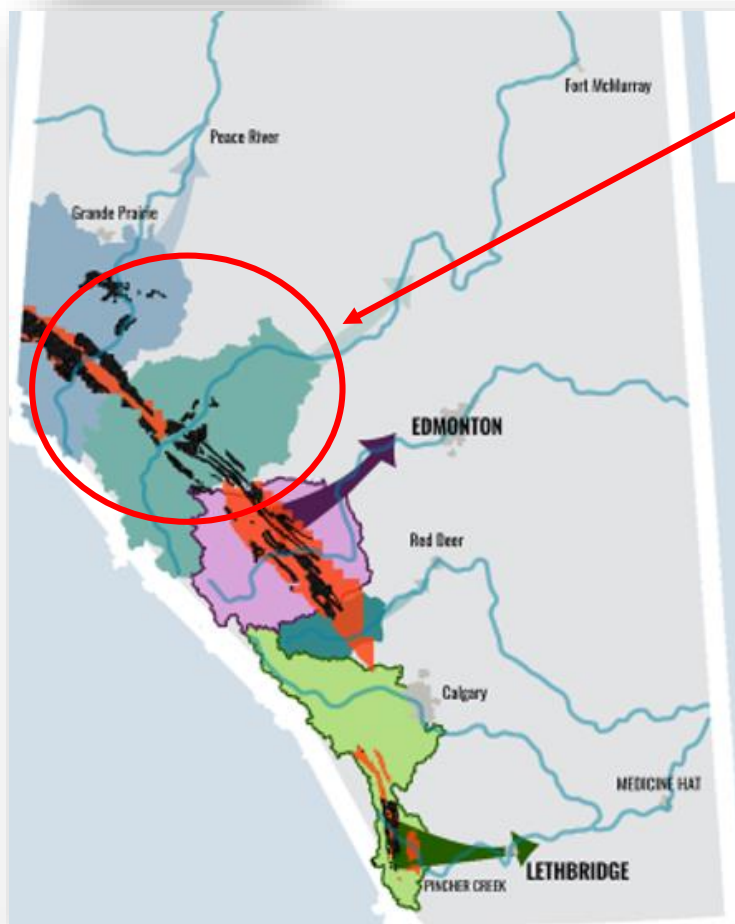
Coal development and selenium impacts on water quality

Athabasca and Peace headwaters – major river systems of the Arctic Ocean drainage basin. Source water for hundreds of thousands in Alberta and the Northwest Territories.

Selenium – is a contaminant in the upper Athabasca watershed in the Gregg River, Luscar Creek and Macleod River systems, and will remain so for decades to come.

There is no known and fully tested way to address selenium contamination at the scale of the proposed coal mine development along the East Slopes.

Reference: Water Chemistry Upstream and Downstream of Coal Mines in the MacLeod River System of west-central Alberta. William F. Donahue. Presentation to the Alberta Coal Policy Committee on Behalf of the Livingstone Landowners Group.



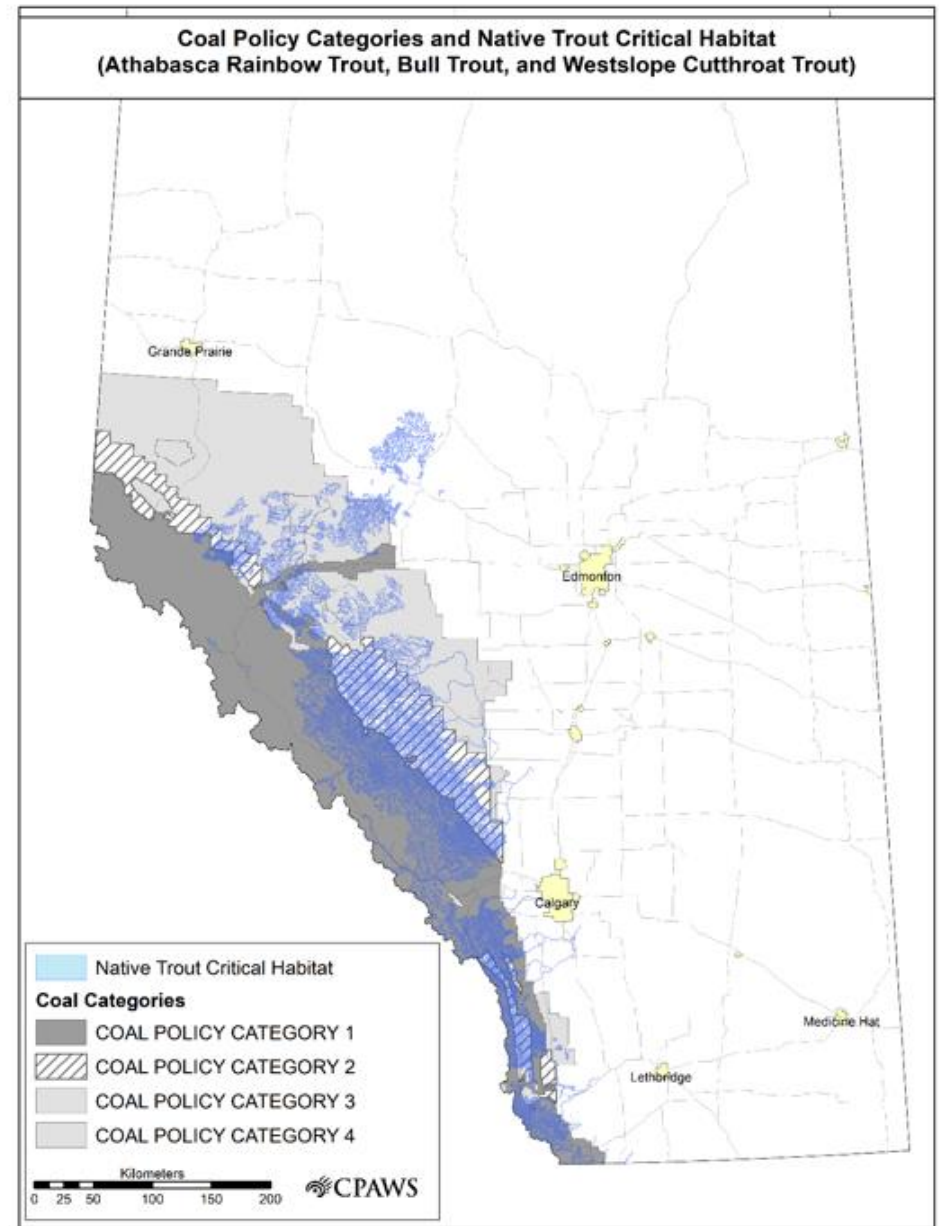


Coal Policy Categories and the intersection with Critical Habitat for Athabasca Rainbow Trout, Bull Trout and Westslope Cutthroat Trout.

The Athabasca Watershed is home to both Bull Trout and Athabasca Rainbow Trout.

Coal development is a major impact on the persistence of these native fish species at risk.

Map courtesy of the Canadian Parks and Wilderness Society





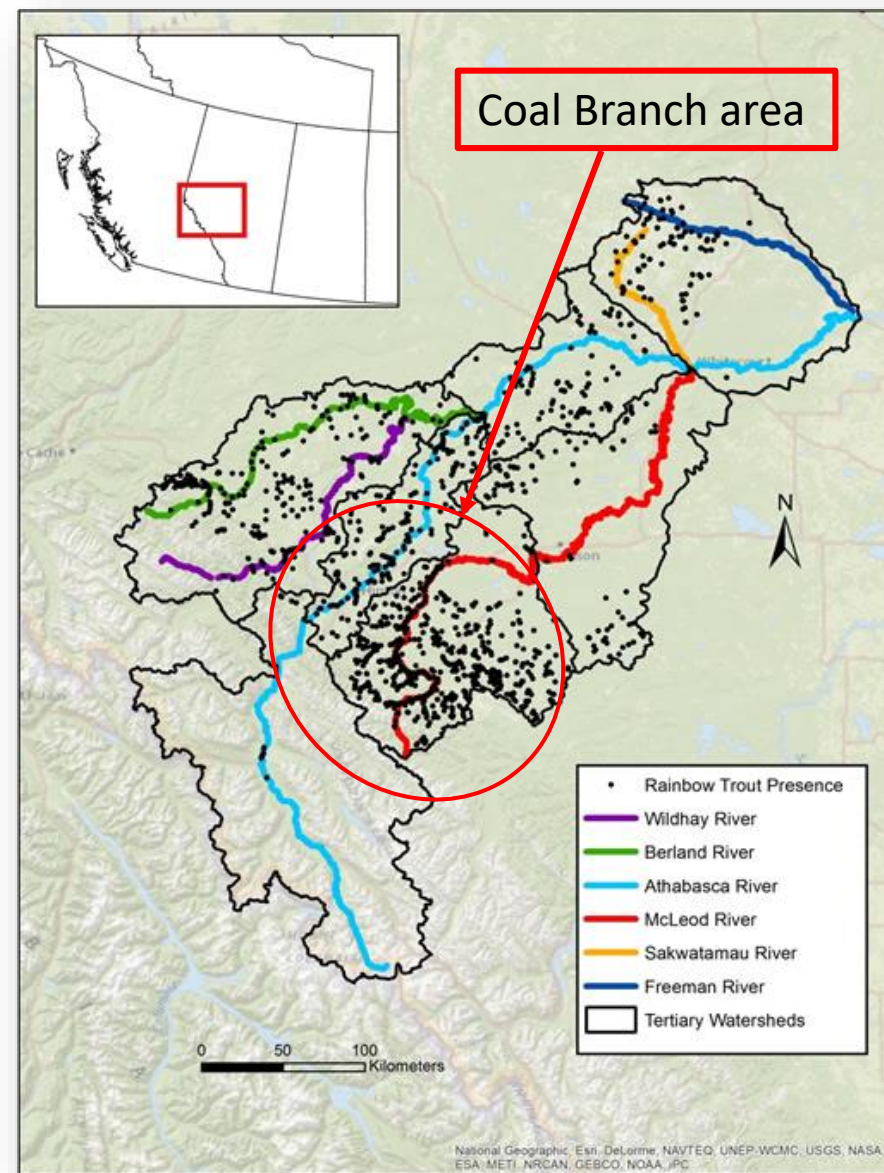
Athabasca Rainbow Trout



Native Alberta Athabasca Rainbow Trout
(*Oncorhynchus mykiss athabasci*)

SARA Status: **Endangered**

Athabasca Rainbow Trout has been assessed and listed in 2021 by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) as Endangered. This is the highest level of risk category and indicates that this species is likely to become **extirpated or extinct**.





Mining impacts on Athabasca Rainbow and other headwaters fish species:

- Loss of critical physical habitats from sediment, concretions, stream channel alterations (and infilling), loss of tributary streams, and riparian buffer losses
- Water quality impacts: sediment loading; impacts from contaminants (e.g., selenium, calcite, pH).
- Hydrologic shifts: ie: erosion, sedimentation, channel instability and altered natural stream/ground water flows that impact spawning and overwintering survival
- Chronic and acute sediment additions that cause cementing of substrate, infilling that affects trout spawning, incubation and aquatic insect production and loss of deep water survival habitats.
- Physiological impacts to trout including noise, disturbance and sediment plumes that increase stress and mortality

Reference: 'Insights on Coal Development from Five Retired Fish and Wildlife Biologists: Submission to the Alberta Coal Policy Committee.'

Prepared by: Lorne Fitch, Jeff Kneteman, Richard Quinlan, Kirby Smith, George Sterling. June, 2021



Biodiversity and mine sites

Coal development impacts on wildlife:

- Direct loss of habitat.
- Physiological stress and behavioral shifts.
- Disturbance and displacement of wildlife.
- Habitat fragmentation and isolation.
- Alteration of ecological functions and process.
- Introduction of competitive, predatory or parasitic organisms.
- Secondary and cumulative effects from increased access and additional development.

Reference: 'Insights on Coal Development from Five Retired Fish and Wildlife Biologists: Submission to the Alberta Coal Policy Committee.' Prepared by: Lorne Fitch, Jeff Kneteman, Richard Quinlan, Kirby Smith, George Sterling. June, 2021



Coal mine Reclamation and Mitigation – outcomes equate to continued loss of biodiversity and landscape health.

Reclamation ‘evidence’ used by coal proponents to demonstrate the value of reclaimed coal mines to wildlife tends to focus on presence/absence of a limited suite of species (e.g., bighorn sheep, grizzly bears)

The focus should be on whether such lands effectively compensate for losses and form useful habitats for a broad range of species.

Surface mining removes native habitat with demonstrated functional benefit and replaces with novel habitat with unknown processes and no known functional benefit. For example: forest interior and old-growth dependent species are lost within the mining footprint.

‘Reclaimed’ mine footprints are wildlife population “sinks”, defined by habitats of lower quality not able to sustain wildlife populations and requiring high quality “source” habitats outside of the mining footprint for wildlife to persist.

Reference: ‘Insights on Coal Development from Five Retired Fish and Wildlife Biologists: Submission to the Alberta Coal Policy Committee.’
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Grande Cache – an ongoing saga of coal boom and bust

Created in the late 1960's as a model coal mine town, Grande Cache has experienced several cycles of boom and bust due to coal mine openings and closures.

In 1972 the mine lost estimated \$7 million. In 1973 it was still losing money and forced to partially close with layoff of 150 workers (almost half of the workforce).

Over the next 44 years, the cycle repeated:

- Japanese, Hong Kong firms paid \$1B for Calgary-based mining operation in 2012,
- in 2014 The Asian owners of Calgary-based Grande Cache Coal have signed a deal to sell a controlling interest in the operation for just \$2 to the Chinese company Up Energy Development Group Ltd.
- The power plant, which employed about 70 people and used scrap coal from the Grande Cache mine, was shut down in 2016.
- As Grande Cache's main source of income failed, the municipal district of Greenview stepped up its support, in 2016 contributing \$3.45 million to the town's municipal operating budget — about one-third of what it costs to maintain local services.
- January 1, 2019, Grande Cache officially gave up its status as a town, and became a hamlet of the MD of Greenview.

Coal is by its nature non-renewable and subject to fluctuations in market prices – and to closures and the loss of hope and optimism by those who depend too heavily on it.



Economic Trends in Hinton – mining, oil and gas in decline – tourism and amenity migration a growing focus of opportunity.

Employment in mining, quarrying and oil and gas extraction indicate a declining sector in the Hinton area:

2011 – 1030 people employed.

2016 – 810 people employed. (-220)

‘The industrial mix effect had a net neutral impact on local employment, with some industries declining in employment (such as mining and oil and gas, manufacturing, and wholesale trade) and others increasing (such as health care and social services and accommodation and food services)’.

Noteworthy: the Economic Development Strategy 2018 has highlighted tourism and the amenity migration phenomena (Lone Eagles) as key opportunities – both sectors are drawn by beautiful mountain landscapes, amazing recreation opportunities as well as health, education and other local services.

Landscapes degraded by coal development are not conducive as a draw for these growing sectors of economic opportunity.

Reference: Town of Hinton Economic Development Strategy, Dec. 2018.



Cumulative Effects Assessment (CEA), planning and implementation

CEA is a foundational need for the East Slopes of Alberta in order to:

- safeguard our increasingly precious headwaters/source waters
- Build resilience to climate change impacts
- Conserve and protect biodiversity – with special emphasis on federal and provincially listed species at risk
- Evaluate 'reclamation and mitigation' for effective ecological function – and learn from mistakes made (ie: reclamation to agronomic non-native grasslands are not functionally/ecologically diverse.)





Athabasca Bioregional Society recommendations

- Coal exploration and development should not be permitted in Alberta's East Slopes. A new policy should cover the area addressed by the 1976 Coal Policy in its entirety, as one East Slopes designation (one 'category') and disallow any further coal development within that category.
- Reclamation costs should be covered entirely by the coal corporations until landscape achieves original or equivalent productivity and biodiversity.
- Any mines currently operation and after shutdown need to adhere to provincial and federal water quality guidelines, and restoration should be consistent with native ecological states and functions.
- Cumulative effects assessments, planning and implementation along Alberta's East Slopes is a critical and immediate need.



The Athabasca Bioregional Society thanks you for your time and attention.

Presenters: Art Jackson, Rocky Notnes

Jim Ochiese - Foothills Ojibway Anishinabe

